

## GLOSSARY AND LIST OF ABBREVIATIONS

**Acre-foot** The volume would cover one acre to a depth of one foot; 43,560 cubic feet; 1,233.5 cubic meters; 325,872 gallons.

**Application Efficiency** The ratio of the volume of irrigation water available for crop use to the volume delivered from the irrigation system. This ratio is always less than 1.0 because of the losses due to evaporation, wind drift, deep percolation, lateral seepage (interflow), and runoff that may occur during irrigation.

**Aquifer** A portion of a geologic formation or formations that yield water in sufficient quantities to be a supply source.

**Aquifer Compaction** The reduction in bulk volume or thickness of a body of fine-grained sediments contained within a confined aquifer or aquifer system. The compaction of these fine-grained sediments results in subsidence, and sometimes fissuring, of the land surface.

**Aquifer Storage and Recovery (ASR)** The injection of freshwater into a confined aquifer during times when supply exceeds demand (wet season), and recovering it during times when there is a supply deficit (dry season).

**Aquifer System** A heterogeneous body of intercalated permeable and less permeable material that acts as a water-yielding hydraulic unit of regional extent.

**Artesian** When ground water is confined under pressure greater than atmospheric pressure by overlying relatively impermeable strata.

**Available Supply** The maximum amount of reliable water supply including surface water, ground water and purchases under secure contracts.

**Average-day Demand** A water system's average daily use based on total annual water production (total annual gallons or cubic feet divided by 365).

**Average Irrigation Requirement** Irrigation requirement under average rainfall as calculated by the District's modified Blaney-Criddle model.

**Backpumping** The practice of pumping water that is leaving the area back into a surface water body.

**Basin (Ground Water)** A hydrologic unit containing one large aquifer or several connecting and interconnecting aquifers.

**Basin (Surface Water)** A tract of land drained by a surface water body or its tributaries.

**BEBR** Bureau of Economic and Business Research is a division of the University of Florida, with programs in population, forecasting, policy research and survey.

**Best Management Practices (BMPs)** Agricultural management activities designed to achieve an important goal, such as reducing farm runoff, or optimizing water use.

**BOR** Basis of Review (for Water Use Applications with the South Florida Water Management District).

**Brackish** Water with a chloride level greater than 250 mg/L and less than 19,000 mg/L.

**Budget (water use)** An accounting of total water use or projected water use for a given location or activity.

**Central and Southern Florida Project Comprehensive Review Study (Restudy)**

A five-year study effort that looked at modifying the current C&SF Project to restore the greater Everglades and South Florida ecosystem while providing for the other water-related needs of the region. The study concluded with the Comprehensive Plan being presented to the Congress on July 1, 1999. The recommendations made within the Restudy, that is, structural and operational modifications to the C&SF Project, are being further refined and will be implemented in the Comprehensive Everglades Restoration Plan (CERP).

**Cone of Influence** The area around a producing well which will be affected by its operation.

**Control Structures** A man-made structure designed to regulate the level and/or flow of water in a canal (e.g., weirs, dams).

**Conservation (water)** Any beneficial reduction in water losses, wastes, or use.

**Conservation Rate Structure** A water rate structure that is designed to conserve water. Examples of conservation rate structures include but are not limited to, increasing block rates, seasonal rates and quantity-based surcharges.

**Consumptive Use** Use that reduces an amount of water in the source from which it is withdrawn.

**Demand** The quantity of water needed to be withdrawn to fulfill a requirement.

**Demand Management (Water Conservation)** Reducing the demand for water through activities that alter water use practices, improve efficiency in water use, reduce losses of water, reduce waste of water, alter land management practices and/or alter land uses.

**Demographic** Relating to population or socioeconomic conditions.

**Desalination** A process which treats saline water to remove chlorides and dissolved solids.

**Domestic Use** Use of water for the individual personal household purposes of drinking, bathing, cooking, or sanitation.

**Drawdown** The distance the water level is lowered, due to a withdraw at a given point.

**DWMP** District Water Management Plan. Regional water resource plan developed by the District under Section 373.036, F. S.

**Effective Rainfall** The portion of rainfall that infiltrates the soil and is stored for plant use in the crop root zone, as calculated by the modified Blaney-Criddle model.

**Evapotranspiration** Water losses from the surface of soils (evaporation) and plants (transpiration).

**Exotic Nuisance Plant Species** A non-native species which tends to out-compete native species and become quickly established, especially in areas of disturbance or where the normal hydroperiod has been altered.

**FASS** Florida Agricultural and Statistics Service, a division of the Florida Department of Agriculture and Consumer Services.

**Flatwoods (Pine)** Natural communities that occur on level land and are characterized by a dominant overstory of slash pine. Depending upon soil drainage characteristics and position in the landscape, pine flatwoods habitats can exhibit xeric to moderately wet conditions.

**Florida Water Plan** State-level water resource plan developed by the FDEP under Section 373.036, F.S.

**Governing Board** Governing Board of the South Florida Water Management District.

**Ground Water** Water beneath the surface of the ground, whether or not flowing through known and definite channels.

**Harm** (*Term will be further defined during proposed Rule Development process*) An adverse impact to water resources or the environment that is generally temporary and short-lived, especially when the recovery from the adverse impact is possible within a period of time of several months to several years, or less.

**Hydroperiod** The frequency and duration of inundation or saturation of an ecosystem. In the context of characterizing wetlands, the term hydroperiod describes that length of time during the year that the substrate is either saturated or covered with water.

**IFAS** The Institute of Food and Agricultural Sciences, that is the agricultural branch of the University of Florida, performing research, education, and extension.

**Infiltration** The movement of water through the soil surface into the soil under the forces of gravity and capillarity.

**Inorganic** Relating to or composed of chemical compounds other than plant or animal origin.

**Irrigation** The application of water to crops, and other plants by artificial means.

**Irrigation Audit** A procedure in which an irrigation systems application rate and uniformity are measured.

**Irrigation Efficiency** The average percent of total water pumped or delivered for use that is delivered to the root zone. of a plant.

**Irrigation Uniformity** A measure of the spatial variability of applied or infiltrated water over the field.

**Lake Okeechobee** Largest freshwater lake in Florida. Located in Central Florida, the lake measures 730 square miles and is the second largest freshwater lake wholly within the United States.

**Leakance** Movement of water between aquifers or aquifer systems.

**Leak Detection** Systematic method to survey the distribution system and pinpoint the exact locations of hidden underground leaks.

**Levee** An embankment to prevent flooding, or a continuous dike or ridge for confining the irrigation areas of land to be flooded.

**Level of Certainty** Probability that the demands for reasonable-beneficial uses of water will be fully met for a specified period of time (generally taken to be one year) and for a specified condition of water

availability, (generally taken to be a drought event of a specified return frequency). For the purpose of preparing regional water supply plans, the goal associated with identifying the water supply demands of existing and future reasonable beneficial uses is based upon meeting those demands for a drought event with a 1-in-10 year return frequency.

**Marsh** A frequently or continually inundated wetland characterized by emergent herbaceous vegetation adapted to saturated soil conditions.

**Micro Irrigation** The application of water directly to, or very near to the soil surface in drops, small streams, or sprays.

**Mobile Irrigation Laboratory** A vehicle furnished with irrigation evaluation equipment which is used to carry out on-site evaluations of irrigation systems and to provide recommendations on improving irrigation efficiency.

**NGVD** National Geodetic Vertical Datum, a nationally established references for elevation data relative to sea level.

**NRCS** The Natural Resources Conservation Service is a federal agency that provides technical assistance for soil and water conservation, natural resource surveys, and community resource protection

**One-in-Ten Year Drought Event** A drought of such intensity, that it is expected to have a return frequency of 10 years (see Level of Certainty).

**Organics** Being composed of or containing matter of, plant and animal origin.

**Overhead Sprinkler Irrigation** A pressurized system, where water is applied through a variety of outlet sprinkler heads

or nozzles. Pressure is used to spread water droplets above the crop canopy to simulate rainfall.

**Per Capita Use** Total use divided by the total population served.

**Permeability** Defines the ability of a rock or sediment to transmit fluid.

**Potable Water** Water that is safe for human consumption (USEPA, 1992).

**Potentiometric Head** The level to which water will rise when a well is drilled into a confined aquifer.

**Potentiometric Surface** An imaginary surface representing the total head of ground water.

**Process Water** Water used for nonpotable industrial usage, e.g., mixing cement.

**Projection Period** The period over which projections are made. In the case of this document, the 25 year period from 1995 to 2020.

**Public Water Supply (PWS) Utilities** Utilities that provide potable water for public use.

**Rapid-Rate Infiltration Basin (RIB)** An artificial impoundment that provides for fluid losses through percolation/seepage as well as through evaporative losses.

**Rationing** Mandatory water-use restrictions sometimes used under drought or other emergency conditions.

**Reasonable-Beneficial Use** Use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both

reasonable and consistent with the public interest.

**Reclaimed Water** Water that has received at least secondary treatment and basic disinfection and is reused after flowing out of a domestic wastewater treatment facility.

**RECOVER** A comprehensive monitoring and adaptive assessment program formed to perform the following for the Comprehensive Everglades Restoration Program: restoration, coordination, and verification.

**Reduced Allocation Areas** Areas in which a physical limitation has been placed on water use.

**Reduced Threshold Areas (RTAs)** Areas established by the District for which the threshold separating a General Permit from an Individual Permit has been lowered from the maximum limit of 100,000 GPD to 20,000 GPD. These areas are typically resource-depleted areas where there have been an established history of sub-standard water quality, saline water movement into ground or surface water bodies, or the lack of water availability to meet projected needs of a region.

**Regional Water Supply Plan** Detailed water supply plan developed by the District under Section 373.0361, F.S.

**Retrofit** The replacement of existing equipment with equipment that uses less water.

**Retrofitting** The replacement of existing water fixtures, appliances and devices with more efficient fixtures, appliances and devices for the purpose of water conservation.

**Restudy** Shortened name for C&SF Restudy.

**Reverse Osmosis (RO)** Process used to produce fresh water from a brackish supply source.

**Saline Water** Water with a chloride concentration greater than 250 mg/L, but less than 19,000 mg/L.

**Saline Water Interface** The hypothetical surface of chloride concentration between fresh water and saline water, where the chloride concentration is 250 mg/L at each point on the surface.

**Saline Water Intrusion** This occurs when more dense saline water moves laterally inland from the coast, or moves vertically upward, to replace fresher water in an aquifer.

**Sea Water** Water which has a chloride concentration equal to or greater than 19,000 mg/L.

**Seepage Irrigation Systems** Irrigation systems which convey water through open ditches. Water is either applied to the soil surface (possibly in furrows) and held for a period of time to allow infiltration, or is applied to the soil subsurface by raising the water table to wet the root zone.

**Semi-Closed Irrigation Systems** Irrigation systems which convey water through closed pipes, and distribute it to the crop through open furrows between crop rows.

**Semi-Confining Layers** Layers with little or no horizontal flow, and restrict the vertical flow of water from one aquifer to another. The rate of vertical flow is dependent on the head differential between the aquifers, as well as the vertical permeability of the sediments in the semi-confining layer.

**Sensitivity Analysis** An analysis of alternative results based on variations in assumptions (a "what if" analysis).

**Serious Harm** *(Term will be defined during proposed Rule Development process)* An extremely adverse impact to water resources or the environment that is either permanent or very long-term in duration. Serious harm is generally considered to be more intense than significant harm.

**Significant Harm** *(Term will be defined during proposed Rule Development process)* An adverse impact to water resources or the environment, when the period of recovery from the adverse impact is expected to take several years; more intense than harm, but less intense than serious harm.

**Slough** A channel in which water moves sluggishly, or a place of deep muck, mud or mire. Sloughs are wetland habitats that serve as channels for water draining off surrounding uplands and/or wetlands.

**Stage** The elevation of the surface of a surface water body.

**Storm Water** Surface water resulting from rainfall that does not percolate into the ground or evaporate.

**Subsidence** An example of subsidence is the lowering of the soil level caused by the shrinkage of organic layers. This shrinkage is due to biochemical oxidation.

**Surface Water** Water that flows, falls, or collects above the surface of the earth.

**Superfund Site** A contamination site, of such magnitude, that it has been designated by the federal government as eligible for federal funding to ensure cleanup.

**SWIM Plan** Surface Water Improvement and Management Plan, prepared according to Chapter 373, F. S.

**TAZ** Traffic analysis zone; refers to a geographic area used in transportation planning.

**Transmissivity** A term used to indicate the rate at which water can be transmitted through a unit width of aquifer under a unit hydraulic gradient. It is a function of the permeability and thickness of the aquifer, and is used to judge its production potential.

**Turbidity** The measure of suspended material in a liquid.

**Ultra-low-volume Plumbing Fixtures** Water-conserving plumbing fixtures that meet the standards at a test pressure of 80 psi listed below.

Toilets - 1.6 gal/flush

Showerheads - 2.5 gal/min.

Faucets - 2.0 gal/min.

**Uplands** Elevated areas that are characterized by non-saturated soil conditions and support flatwood vegetation.

**Wastewater** The combination of liquid and waterborne discharges from residences, commercial buildings, industrial plants and institutions together with any ground water, surface runoff or leachate that may be present.

**Water Resource Caution Areas** Areas that have existing water resource problems or where water resource problems are projected to develop during the next 20 years (previously referred to as critical water supply problem areas).

**Water Resource Development** The formulation and implementation of regional water resource management strategies, including: the collection and evaluation of surface water and ground water data; structural and nonstructural programs to protect and manage the water resource; the development of regional water resource implementation programs; the construction, operation, and maintenance of major public works facilities to provide for flood control, surface and underground water storage, and ground water recharge augmentation; and, related technical assistance to local governments and to government-owned and privately owned water utilities.

**Water Shortage Declaration** *Rule 40E-21.231, Fla. Admin. Code:* "If ...there is a possibility that insufficient water will be available within a source class to meet the estimated present and anticipated user demands from that source, or to protect the water resource from serious harm, the Governing Board may declare a water shortage for the affected source class." Estimates of the percent reduction in demand required to match available supply is required and identifies which phase of drought restriction is implemented. A gradual progression in severity of restriction is implemented through increasing phases. Once declared, the District is required to notify permitted users by mail of the restrictions and to publish restrictions in area newspapers.

**Water Supply Plan** District plans that provide an evaluation of available water supply and projected demands, at the regional scale. The planning process projects future demand for 20 years and develops strategies to meet identified needs.

**Water Supply Development** The planning, design, construction, operation, and maintenance of public or private facilities

for water collection, production, treatment, transmission, or distribution for sale, resale, or end use.

**Wetlands** Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

**Wetland Drawdown Study** Research effort by the South Florida Water Management District to provide a scientific basis for developing wetland protection criteria for water use permitting.

**Xeriscape™** Landscaping that involves seven principles: proper planning and design; soil analysis and improvement; practical turf areas; appropriate plant selection; efficient irrigation; mulching; and appropriate maintenance.

